

REMARKS

Claims 1-27 are pending in the application, of which claims 1, 9, 20-22, and 25 are independent. Claims 1, 9, 20, 22, and 25 have been amended for clarity. No new matter has been added. Reconsideration of the action mailed November 4, 2004, is respectfully requested in light of the foregoing amendments and the following remarks.

The Examiner rejected claims 1-4, 8-12, 14, 15, and 21 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,360,037 to Riza ("Riza"). The Examiner rejected claims 20, 22, 23, 25, and 26 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,178,044 to Li et al. ("Li"). The Examiner rejected claims 5-7, 13, and 16-19 under 35 U.S.C. § 103(a) as being unpatentable over Riza in view of Li. Applicant traverses the rejections.

The Examiner objected to claims 24 and 27 as being dependent upon rejected base claims, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant appreciates the Examiners identification of allowable subject matter in claims 24 and 27.

Section 102 Rejections

Claim 1 stands rejected as anticipated by Riza. Claim 1, as amended, is directed towards a 2x2 optical switch that includes light beams exiting from the first component group with each light beam having a first chosen polarization. Riza does not disclose or suggest a first component group where each exiting light beam has a first polarization.

The Examiner states that Riza discloses the claimed first component group in FIG. 3 as elements 14a and 26a. Applicant respectfully disagrees. Element 14a is an optical circulator and element 26a is a fiber-optic lens. *See* col. 4, lines 59-61. The light exiting element 26a is not singularly polarized with a first polarization. Instead the light exiting element 26a is randomly polarized. The randomly polarized light is then separated into vertically and horizontally polarized light (e.g., polarized beams 30 and 32 of FIG. 3) by beam displacing prism 28. *See* FIG. 3; col. 4, lines 55-66. Riza, therefore, does not disclose or suggest a first component group that exits light beams where each light beam has the same polarization. In contrast, claim 1

requires that each light beam exiting the first component group have a first polarization (*i.e.*, all light beams exiting the first component have the same polarization). Applicant respectfully submits that claim 1, as well as claims 2-8, which depend from claim 1, are in condition for allowance.

Claim 9 stands rejected as anticipated by Riza. Claim 9, as amended, is directed towards an optical switch that includes a first component group operable to provide light beams to a switching component group with each provided light beam having a first polarization. Riza does not disclose or suggest a first component group that provides light beams, each having a first polarization, to a switching component group. For at least the reasons set forth above with respect to claim 1, claim 9 as well as claims 10-19, which depend from claim 9, are in condition for allowance.

Claim 20 stands rejected as anticipated by Li. Claim 20, as amended, is directed to an optical switch that includes a structured half wavelength plate operable to rotate a polarization of light passing through a first portion of the structured half wavelength plate while the polarization of light passing through a second portion of the structured half wavelength plate remains substantially unchanged. Li does not disclose or suggest an optical switch including a structured half wavelength plate operable to rotate a polarization of light passing through a portion of the structured half wavelength plate while passing light through a second portion without rotating the polarization of light.

The Examiner states that FIG. 2 of Li discloses a structured half wavelength plate. Applicant respectfully disagrees. Li discloses an optical device that includes elements 112 and 120, which are pairs of half wave plates. *See* FIG. 2; col. 4, lines 17-21. Each pair of half wavelength plates rotate the polarization of all the light passing through. *See* col. 5, line 58 to col. 6, line 24. Li does not disclose or suggest a structured half wavelength plate that only rotates the polarization of a portion of the light passing through while leaving the polarization of light passing through another portion substantially unchanged. Applicant respectfully submits that claim 20 is in condition for allowance.

Claim 21 stands rejected as anticipated by Riza. Claim 21 is directed to an optical switch that includes a first component group adapted to provide an optical output having a first polarization to a switching component group. Riza does not disclose or suggest a first component group that is adapted to provide an optical output having a first polarization. As set forth above with respect to claim 1, Riza's first component group only outputs randomly polarized light. Thus, the optical output in Riza has more than one polarization. In contrast, claim 1 requires the optical output from the first component group to have a first polarization only. Applicant respectfully submits that claim 21 is in condition for allowance.

Claim 22 stands rejected as anticipated by Li. Claim 22, as amended, is directed to an optical component that includes a structured half wavelength plate being operable to rotate a polarization of light passing through a first portion of the structured half wavelength plate while the polarization of light passing through a second portion of the structured half wavelength plate remains substantially unchanged. For at least the reasons set forth above with respect to claim 20, claim 22 as well as claims 23-24, which depend from claim 22, are in condition for allowance.

Claim 25 stands rejected as anticipated by Li. Claim 25, as amended, is directed to an optical component group that includes a structured half wavelength plate being operable to rotate a polarization of light passing through a first portion of the structured half wavelength plate while the polarization of light passing through a second portion of the structured half wavelength plate remains substantially unchanged. For at least the reasons set forth above with respect to claim 20, claim 25 as well as claims 26-27, which depend from claim 25, are in condition for allowance.


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Applicant respectfully requests that all pending claims be allowed. Please apply any charges or credits to deposit account 06-1050.

Respectfully submitted,

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